

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 04-8057-SNY	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/JP2004/009885	International filing date (day/month/year) 05.07.2004	Priority date (day/month/year) 04.07.2003
International Patent Classification (IPC) or national classification and IPC G11C11/41, G11C11/419		
Applicant SONY CORPORATION		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 4 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising: a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of 2 sheets, as follows: <input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/009885

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following _____ which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-23 _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. 2, 4, 6, 8-16 _____ as originally filed/furnished
- nos.* 1, 5 _____ as amended (together with any statement) under Article 19
- nos.* _____ received by this Authority on _____
- nos.* _____ received by this Authority on _____
- ☒ the drawings:
- sheets fig. 1-12 _____ as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☒ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☒ the claims, nos. 3, 7 _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1, 2, 4-6, 8-16	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1, 2, 4-6, 8-16	NO
Industrial applicability (IA)	Claims	1, 2, 4-6, 8-16	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

Document 1: JP 9-128958 A (Sony Corp.), 16 May 1997
Document 2: JP 2001-521262 A (Artisan Components, Inc.),
6 November 2001

The inventions set forth in claims 1, 2, 4, 9 to 12, and 14 to 16 do not involve an inventive step in the light of document 1 cited in the international search report.

Document 1 (paragraph [0029]) discloses a feature wherein an enable signal (EN) is switched to a low level based on the signal input from a dummy bit line (DBL/DBLB), a row decoder (RDC) and a column decoder (CDC) are controlled in a non-active state, and pre-charge operation is begun.

Further, document 1 (fig. 3) discloses a feature wherein pre-charge/pull-up transistors (DP1, DP2) for a dummy bit line pair are controlled using a column selection signal (COL). As noted above, the same control is carried out for the row decoder (RDC) and column decoder (CDC) in the invention disclosed in document 1, and it is obvious that control of DP1 and DP2 can also be carried out using a word line (WL).

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Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

Moreover, the use of a sense amplifier for carrying out a comparison of the readout from a memory cell with a reference voltage is known in the art, and thus, a person skilled in the art could easily conceive of using said sense amplifier for the readout from a dummy cell.

The inventions set forth in claims 5, 6, 8, and 13 do not involve an inventive step in the light of document 1 and document 2 cited in the international search report.

The separate provision of a word line for a dummy cell and a word line for a memory cell, and the provision of dummy cells in a row direction and in a column direction are known in the art, as disclosed in document 2 (fig. 1), and thus, a person skilled in the art could easily conceive of applying the above configurations to the invention disclosed in document 1.